

86TH CONGRESS  
1ST SESSION

# S. 2692

## IN THE SENATE OF THE UNITED STATES

SEPTEMBER 11 (legislative day, SEPTEMBER 5), 1959

MR. MAGNUSON (for himself, Mr. SMATHERS, Mr. SCHOEPEL, Mr. BARTLETT, Mr. YARBOROUGH, Mr. CASE of New Jersey, Mr. ENGLE, Mr. SCOTT, Mr. MCGEE, Mr. BUTLER, Mr. HART, Mrs. SMITH, and Mr. CLARK) introduced the following bill; which was read twice and referred to the Committee on Interstate and Foreign Commerce

## A BILL

To advance the marine sciences, to establish a comprehensive ten-year program of oceanographic research and surveys; to promote commerce and navigation, to secure the national defense; to expand ocean resources; to authorize the construction of research and survey ships and facilities; to assure systematic studies of effects of radioactive materials in marine environments; to enhance the general welfare; and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 SHORT TITLE

4 SECTION 1. This Act may be cited as the "Marine  
5 Sciences and Research Act of 1959".

**1**

2

18

1 The Congress further declares that to meet the objec-  
2 tives outlined in the preceding paragraphs of this Act there  
3 must be a coordinated, long-range program of oceanographic  
4 research similar or identical to that recommended as a  
5 minimal program by the Committee on Oceanography of  
6 the National Academy of Sciences-National Research Council  
7 which requires but is not limited to the—

8 1. construction of modern, oceangoing ships for  
9 scientific research, surveys, fisheries exploration and  
10 marine development;

11 2. construction of laboratory and shore facilities  
12 adequate to service and supplement the research and  
13 survey fleets;

14 3. development and acquisition of new and improved  
15 research tools, devices, instruments, and techniques in-  
16 cluding but not limited to bathyscaphs and other manned  
17 submersibles, manned and unmanned deep ocean buoys,  
18 modified icebreakers, accoustical equipment and tele-  
19 metering devices, current meters, direct density, turbu-  
20 lence and radioactivity measuring devices, biological  
21 sampling instruments, precision salinometers and echo  
22 sounders, magnetometers, and deep sea underwater  
23 cameras;

24 4. recruitment of prospective oceanographers from  
25 among undergraduate students of physics, chemistry,

1 biology and geology and the facilitating of their ad-  
2 vanced education in the marine sciences by a long-term  
3 fellowship program, where necessary, supported by or  
4 through the National Science Foundation or other ap-  
5 propriate agency of the Federal Government;

6 5. improvement of the economic and general wel-  
7 fare by obtaining more adequate information in the field  
8 of oceanography concerning the occurrence, behavior,  
9 and potential use of fish, shellfish, and other marine life,  
10 and thereby to enhance the development and utilization  
11 of living marine resources;

12 6. establishment of a national oceanographic records  
13 center to assemble, prepare and disseminate all scientific  
14 and technical oceanographic and closely related data, in-  
15 cluding but not limited to physical, biological, fisheries,  
16 hydrographic and coastal survey, meteorological and  
17 climatological data. All nonclassified data shall be made  
18 available for public use; and

19 7. development of formal international cooperation  
20 in the marine sciences on a reciprocal basis subject to  
21 approval by the President.

22 The Congress further declares that a coordinated, long-  
23 range program of oceanographic research requires establish-  
24 ment of a Division of Marine Sciences in the National  
25 Science Foundation, which shall include representation from

1 Government agencies having duties or responsibilities con-  
2 nected with or related to the seas and oceans, and oceano-  
3 graphic scientists associated with universities, institutions  
4 affiliated with universities, laboratories or foundations, and  
5 which Division shall be authorized and directed—

6 (a) to develop and encourage a continuing national  
7 policy and program for the promotion of oceanographic  
8 research, surveys and education in the marine sciences:  
9 *Provided*, That the long range program for oceanographic  
10 research developed and projected by the Chief of Naval  
11 Research, Department of the Navy, and approved by  
12 the Chief of Naval Operations, known as project  
13 TENOC (Ten Years in Oceanography) be incorporated  
14 in the national program and policy;

15 (b) to recommend contracts, grants, loans or other  
16 forms of assistance for the development and operation  
17 of a comprehensive national program of oceanographic  
18 research and education in the marine sciences;

19 (c) to cooperate with and encourage the coopera-  
20 tion of the Office of Naval Research, the Hydrographic  
21 Office, the Bureau of Ships, the Coast and Geodetic Sur-  
22 vey, the Bureau of Commercial Fisheries, the Atomic  
23 Energy Commission, the Maritime Administration, the  
24 United States Weather Bureau, the United States Coast  
25 Guard, the United States Geological Survey, the Na-

1        tional Bureau of Standards, and other Government agen-  
2        cies dealing with problems related to the seas, and the  
3        National Academy of Sciences—National Research  
4        Council and administrators and scientists of all universi-  
5        ties and institutions receiving assistance from Federal  
6        agencies for oceanographic or fisheries research or edu-  
7        cation in the marine sciences in the form of contracts,  
8        loans, grants, leases, donations, scholarships, fellowships  
9        or transfers of funds or property of the Federal  
10       Government;

11       (d) to foster the interchange of information among  
12       marine scientists in the United States and foreign nations  
13       within the security provisions and limitations of the  
14       National Science Foundation Act of 1950 (64 Stat.  
15       ch. 171) ; and

16       (e) to evaluate the scientific aspects of programs of  
17       oceanographic and fisheries research and surveys under-  
18       taken by agencies of the Federal Government, univer-  
19       sities and institutions receiving assistance from the Fed-  
20       eral Government for oceanographic and fisheries re-  
21       search and ocean surveys.

22       NATIONAL SCIENCE FOUNDATION, DIVISION OF MARINE  
23       SCIENCES

24       SEC. 3. (a) Section 7 (a) of the National Science  
25       Foundation Act of 1950 is hereby amended by striking

1 "and" after the semicolon in (3), redesignating (4) as  
2 (5) and inserting immediately after (3) the following new  
3 section:

4 " (4) Division of Marine Sciences; and".

5 (b) Section 8 (b) of the National Science Foundation  
6 Act of 1950 is hereby amended by substituting a semicolon  
7 for the period after "Board" and inserting immediately  
8 thereafter the following new proviso: "*Provided*, That the  
9 Division of Marine Sciences shall include among its member-  
10 ship a representative from the Office of Naval Research, the  
11 Hydrographic Office, the Coast and Geodetic Survey, the  
12 Bureau of Commercial Fisheries, the Atomic Energy Com-  
13 mission, the Maritime Administration, and at least six  
14 scientists from the universities and institutions receiving  
15 assistance from the foregoing agencies."

16 SEC. 4. It is necessary in order to carry out the policies  
17 of S. Res. 136, Eighty-sixth Congress, and of this Act to  
18 have the National Science Foundation carry out, under laws,  
19 as amended, relating to such Foundation, specified duties as  
20 part of the general program for the development of the  
21 marine sciences in the United States. Appropriations  
22 authorized in this section shall be in addition to other appro-  
23 priations provided for such Foundation to carry out its duties  
24 under law. There is hereby authorized to be appropriated  
25 to the National Science Foundation, during the ten-year

1 period beginning with July 1 of the first fiscal year following  
2 approval of this Act by the President, the following sums:

3 (a) The sum of \$9,950,000 for the construction of  
4 oceanographic research ships;

5 (b) The sum of \$12,440,000 for the operation of  
6 oceanographic research ships constructed under this Act;

7 (c) The sum of \$8,250,000 for construction of shore  
8 facilities for oceanographic research;

9 (d) The sum of \$37,200,000 for basic oceanographic  
10 research operations: *Provided, however,* That the expendi-  
11 ture under this subsection (d) shall not exceed \$8,000,000  
12 in any one year of the ten-year program.

13 (e) Such sums as may be adequate for specialized  
14 equipment for ocean exploration and research which may  
15 include bathyscaphs and other manned submersibles, manned  
16 and unmanned buoys, icebreakers and submarines converted  
17 for scientific use, acoustic telemetering devices, current  
18 meters, direct density measuring devices, cameras and under-  
19 water television, seismic equipment, turbulence measuring  
20 devices, biological sampling devices, precision salinometers,  
21 precision echo sounders, towed temperature recorders,  
22 magnetometers and other instruments and laboratory equip-  
23 ment: *Provided, however,* That expenditures under this sub-  
24 section (e) shall not exceed \$10,000,000 in any one year  
25 of the ten-year program.



1 (f) The sum of \$3,000,000 for fellowships to graduate  
2 students training to become professional oceanographers:  
3 *Provided, however,* That annual costs of these fellowships  
4 shall not exceed \$300,000.

5 BUREAU OF MINES AND BUREAU OF COMMERCIAL FISH-  
6 ERIES, DEPARTMENT OF THE INTERIOR

7 SEC. 5. The Secretary of the Interior is authorized and  
8 directed, with such funds as may be appropriated or other-  
9 wise made available to him, to undertake a ten-year program  
10 of study and research as part of the general program for  
11 the development of the marine sciences in the United States.  
12 In furtherance of the purposes of this Act, the Secretary is  
13 authorized and directed to carry out, in addition to programs  
14 now underway, the following activities:

15 (a) Make grants of funds to qualified scientists, research  
16 laboratories or institutions in furtherance of the purposes of  
17 this Act, such grants to be used for basic and applied research  
18 programs, the purchase of equipment, acquisition or improve-  
19 ment of facilities, and for other uses necessary to carry out  
20 the work hereunder.

21 (b) Initiate and carry out a program for the replace-  
22 ment, modernization and enlargement in the number of  
23 oceangoing ships being used for research, exploration, sur-  
24 veying and the development of marine resources.

1 (c) Construct and operate a sufficient number of shore  
2 facilities and laboratories to support effectively the vessels  
3 provided for under the preceding item (b).

4 (d) Cooperate with other departments and agencies in  
5 the conduct of oceanwide surveys from which data relative  
6 to the study of ocean resources may be obtained.

7 (e) Conduct studies concerning the relation of marine  
8 life to radioactive elements, such studies to be directed to-  
9 ward determining the effect of distribution of radioactive  
10 elements in the sea on living marine organisms, and other  
11 such studies as the Secretary deems necessary to understand  
12 and evaluate the relation of radioactivity to the inhabitants  
13 of the marine environment.

14 (f) Conduct studies of the economic and legal aspects  
15 of commercial fisheries and the utilization of marine products.

16 (g) Request and obtain cooperation from other gov-  
17 ernmental agencies having an interest in the marine sciences,  
18 and cooperate with the several States, educational institu-  
19 tions, laboratories devoted to fishery research, marine science,  
20 oceanography, and with other public and private organiza-  
21 tions and persons who may be of assistance.

22 (h) Determine the reserves of metals of industrial, com-  
23 mercial or monetary value in or beneath adjacent waters, and  
24 to ascertain techniques and probable costs of their recovery  
25 and extraction.

1 (i) Take such action and carry out other activities which  
2 he finds will accomplish the purposes of this Act.

3 SEC. 6. It is necessary in order to carry out the policies  
4 of S. Res. 136, Eighty-sixth Congress, and of this Act to  
5 have the Department of the Interior and its Bureaus and  
6 Offices carry out, under laws relating to such Department  
7 and its Bureaus and Offices, specified duties as part of the  
8 general program for the development of the marine sciences  
9 in the United States. Appropriations authorized in this sec-  
10 tion shall be in addition to other appropriations provided  
11 for such Department to carry out its duties under law.  
12 There is hereby authorized to be appropriated to the Bureau  
13 of Mines and the Bureau of Commercial Fisheries, Depart-  
14 ment of the Interior, during the ten-year period beginning  
15 with July 1 of the first fiscal year following approval of  
16 this Act by the President, the following sums:

17 (a) Such sums as may be necessary for construction  
18 of new ships for fisheries exploration and research: *Provided,*  
19 *however,* That in the construction of these ships, modern  
20 fisheries exploration and research vessels of other nations  
21 shall be studied with respect to design and performance  
22 with a view to increasing the seaworthiness, range, and  
23 efficiency of the United States fisheries research fleet.

24 (b) Such sums as necessary for operation of new fish-  
25 eries research and exploration ships: *Provided, however,*

1 That operation costs for new research ships placed in opera-  
2 tion by the Bureau of Commercial Fisheries not aggregate  
3 in excess of \$2,000,000 per annum: *Provided further*, That  
4 in planning operations of the new research and exploration  
5 ships of the Bureau of Commercial Fisheries, the Secretary  
6 of the Interior shall give full consideration to the needs  
7 for such operation in the Gulf of Mexico, Bering Sea, other  
8 ocean areas of potential commercial importance, and the  
9 Great Lakes.

10 (c) Such sums as the departments deem adequate for  
11 capital expenditures in inaugurating, developing, or expand-  
12 ing new ocean resource studies and surveys, or constructing  
13 or procuring facilities for such studies including, but not  
14 limited to, unmanned buoys for automatic continuous  
15 oceanographic records, mesoscaphs for biological observa-  
16 tions, automatic continuous plankton samplers, oceanaria and  
17 instrumentation for studies of marine life behavior, labora-  
18 tories for research into marine survival, and establishment of  
19 an institute for research on diseases of fish, shellfish, and  
20 other marine life: *Provided, however*, That in constructing  
21 or procuring facilities for ocean resource studies, and in in-  
22 augurating such studies, full consideration be given to the  
23 fisheries resources of the Pacific and Atlantic Oceans north  
24 of 40 degrees north latitude, between 15 degrees and 40 de-  
25 grees north latitude, the Gulf of Mexico, Bering Sea, other

1 ocean areas of potential commercial value, and the Great  
2 Lakes, and that such facilities be located where they may  
3 provide maximum benefits to fishermen and other citizens re-  
4 siding in the United States.

5 (d) Such sums as are necessary for operations, exclud-  
6 ing ship operations, of fisheries resource studies including,  
7 but not limited to, those stated above in (c) marine popula-  
8 tion sampling, biological surveys, ecological mapping,  
9 taxonomic development, genetics of marine organisms, pond  
10 fish culture and braking water farming, estuarine studies,  
11 transportations and nutrient increase research: *Provided,*  
12 *however,* That expenditures for operations of new resources  
13 studies by the Bureau of Commercial Fisheries of the De-  
14 partment of the Interior not exceed \$10,000,000 per annum.

15 (e) The sum of \$6,500,000 for continuing studies over  
16 a ten-year period of utilization of marine products for human  
17 consumption, animal feeds, industrial purposes, fertilizers  
18 and organic chemicals, and the development of new uses  
19 of marine products: *Provided, however,* That in directing  
20 these studies the Secretary of the Interior shall give full  
21 consideration to their being carried on in existing institu-  
22 tions through the issuance of grants to said institutions, for  
23 continuing studies over a ten-year period of the economics  
24 and law of commercial fisheries and for the investigation of

1 the mineral deposits on the ocean floor and mineral resources  
2 in the sea.

3 DEPARTMENT OF COMMERCE

4 SEC. 7. The Secretary of Commerce is authorized and  
5 directed, with such funds as may be appropriated or other-  
6 wise made available to him, to undertake a ten-year program  
7 of study and research as part of the general program for  
8 the development of the marine sciences in the United States.  
9 In furtherance of the purposes of this Act, the Secretary is  
10 authorized and directed to carry out the following activities:

11 (a) Request and obtain cooperation from other Gov-  
12 ernment agencies having an interest in the marine sciences  
13 and ocean surveys, and cooperate with educational institu-  
14 tions and laboratories devoted to the marine sciences and  
15 oceanography, and with other public and private organiza-  
16 tions and persons who may be of assistance.

17 (b) Establish within the Department of Commerce  
18 a National Oceanographic Records Center, which records  
19 center shall collect from other agencies and departments  
20 of the Federal Government, agencies of the several States,  
21 oceanographic institutions and laboratories and other sources,  
22 all oceanographic data, and prepare and disseminate such  
23 oceanographic data for public use.

24 (c) Initiate and carry out a program for the replace-  
25 ment, modernization and enlargement in the number of

1 oceangoing ships for use in ocean and coastal surveys by  
2 the Coast and Geodetic Survey.

3 (d) Construct and operate a sufficient number of Coast  
4 and Geodetic Survey shore facilities to support effectively  
5 the vessels provided for under the preceding item (a), and  
6 provide instruments and equipment essential for efficient  
7 utilization of such shore facilities or survey ships.

8 (e) Inaugurate in the Weather Bureau a comprehensive  
9 ten-year study of the interchange of energy between the  
10 oceans and the atmosphere, and to prepare, based on such  
11 study, climatological maps illustrating the balance of in-  
12 coming and outgoing radiation and heat exchange between  
13 the oceans and the atmosphere. The provisions of this sub-  
14 section (e) may be carried out by means of contracts with  
15 public or private organizations, or by grants to scientific  
16 institutions carrying on such studies.

17 (f) Require that the Maritime Administration construct  
18 ships of approximately five hundred tons and one thousand  
19 two hundred to one thousand five hundred tons displace-  
20 ment specifically designed for basic oceanographic research  
21 with due attention given to suitable arrangements of labora-  
22 tory space and living quarters for scientists, space and power  
23 for winches and other auxiliaries, sea keeping and handling  
24 qualities at low speeds, quiet operation, efficient and eco-  
25 nomical scientist-crew ratios, and operation in all kinds of

1 weather, such ships, when completed, to be made available,  
2 at the discretion of the Secretary, to nonprofit oceanographic  
3 research centers, to other agencies of the Federal Govern-  
4 ment, or, pursuant to negotiated contracts or grants, to State  
5 institutions engaged to oceanographic research requiring  
6 oceangoing scientific ships, with preference given to such  
7 institutions which have engaged in such research prior to  
8 this Act.

9 SEC. 8. It is necessary in order to carry out the policies  
10 of S. Res. 136, Eighty-sixth Congress, and of this Act to  
11 have the Department of Commerce and its Bureaus and  
12 Offices carry out, under laws, as amended, relating to such  
13 Department or such Bureaus and Offices, specified duties as  
14 part of the general program for the development of the  
15 marine sciences in the United States. Appropriations au-  
16 thorized in this section shall be in addition to other appro-  
17 priations provided for such Department to carry out its  
18 duties under law. There is hereby authorized to be appro-  
19 priated to the Department of Commerce and its Bureaus  
20 and Offices, during the ten-year period beginning with July  
21 1, of the first fiscal year following approval of this Act by  
22 the President, the following sums:

23 (a) The sum of \$250,000 for capital outlay in the estab-  
24 lishment of a National Oceanographic Records Center.

25 (b) Such sums as are necessary for operating expenses



1 of a National Oceanographic Records Center: *Provided,*  
2 *however,* That expenses for this purpose during the first year  
3 not exceed \$100,000, and that this amount shall not be in-  
4 creased more than 10 per centum per annum in each of the  
5 subsequent years of this program.

6 (c) Such sums as are necessary for construction by or  
7 for the Coast and Geodetic Survey of two survey ships of  
8 five hundred tons displacement, six survey ships of one thou-  
9 sand two hundred to one thousand five hundred tons dis-  
10 placement, and two survey ships of two thousand tons dis-  
11 placement or more.

12 (d) Such sums as are necessary for operations of new  
13 Coast and Geodetic Survey survey ships authorized under  
14 this Act during the ten-year life of this program—

15 for construction of new shore facilities for processing  
16 and evaluating Coast and Geodetic Survey data obtained  
17 through surveys and related research conducted from  
18 new oceangoing Coast and Geodetic Survey ships;

19 for expanded operations, excluding ship operations,  
20 of the Coast and Geodetic Survey during a ten-year  
21 period; and

22 for the establishment and operations of a ten-year  
23 study of the interchange of energy between the oceans  
24 and the atmosphere.

1 DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,  
2 OFFICE OF EDUCATION

3 SEC. 9. The Secretary of Health, Education, and Wel-  
4 fare is authorized and directed, with such funds as may be  
5 appropriated or otherwise made available to him, to under-  
6 take a ten-year program of obtaining new faculty in oceanog-  
7 raphy and marine sciences as part of the general program  
8 for the development of the marine sciences in the United  
9 States. In furtherance of the purposes of this Act, the  
10 Secretary is authorized to provide assistance through the  
11 Office of Education in the form of teacher salaries and  
12 equipment.

13 SEC. 10. It is necessary in order to carry out the policies  
14 of S. Res. 136, Eighty-sixth Congress, and of this Act to  
15 have the Office of Education, Department of Health, Edu-  
16 cation, and Welfare carry out, under laws relating to such  
17 Department or Office, specified duties as part of the general  
18 program for the development of the marine sciences in the  
19 United States. Appropriations authorized in this section  
20 shall be in addition to other appropriations provided for such  
21 Department or Office to carry out its duties under law.

22 ATOMIC ENERGY COMMISSION

23 SEC. 11. In furtherance of the policies in S. Res. 136,  
24 Eighty-sixth Congress, and of this Act, and for the purpose  
25 of determining the effects of radioactive contamination upon

1 the oceans and life within the oceans and their estuaries, and  
2 for regulating in the interests of public safety, health and  
3 welfare, the introduction of radioactive materials in the  
4 oceans, the Atomic Energy Commission is hereby authorized  
5 to conduct, in the marine environment, an intensive ten-  
6 year program of control and monitoring of radioactive waste  
7 disposal and studies including, but not limited to, circulation  
8 and mixing processes which affect the dispersion of introduced  
9 contaminants in coastal and estuarine environments and in  
10 the open ocean, inorganic transfer of radioactive elements  
11 from seawater to sediments, the effect of radioactive elements  
12 on living organisms in the oceans, coastal waters and  
13 estuaries and the genetic effects of radiation on such  
14 organisms. The Atomic Energy Commission is further  
15 authorized to carry out any of its duties or functions under  
16 this or other Acts, including the use of scientific ships and  
17 personnel, in cooperation with other agencies of the Federal  
18 Government, or through contracts with or grants to State  
19 institutions or independent scientific laboratories undertaking  
20 or equipped to undertake such programs: *Provided, how-*  
21 *ever,* That those aspects of the program relating to regu-  
22 lating and monitoring the introduction of radioactive  
23 material in the ocean shall be carried out by the Coast and  
24 Geodetic Survey or the Public Health Service, or both, with  
25 funds made available by the Atomic Energy Commission.

1        SEC. 12. It is necessary in order to carry out the policies  
2 of S. Res. 136, Eighty-sixth Congress, and of this Act to  
3 have the Atomic Energy Commission carry out, under  
4 laws relating to such Commission, specified duties as part  
5 of the general program for the development of the marine  
6 sciences in the United States. Appropriations authorized  
7 in this section shall be in addition to other appropriations  
8 provided for such Commission to carry out its duties under  
9 law. There is hereby authorized to be appropriated to the  
10 Atomic Energy Commission, during the ten-year period  
11 beginning with July 1 of the first fiscal year following  
12 approval of this Act by the President, the following sums  
13 as are necessary—

14            for engineering studies in connection with control  
15 and monitoring as authorized in section 11 of this Act:  
16 *Provided, however,* That expenditures for this purpose  
17 not exceed \$370,000 in any one year of the ten-year  
18 program authorized by this Act;

19            for participating in international meetings of scien-  
20 tists and technical experts relating to international control  
21 and monitoring of radioactive waste disposal in the ma-  
22 rine environment: *Provided, however,* That expenditures  
23 for this purpose not exceed \$30,000 in any one year of  
24 the ten-year program;

25            for estuarine and coastal studies authorized in section

1 12 of this Act: *Provided, however,* That expenditures for  
2 this purpose not exceed \$2,800,000 in any one year of  
3 the ten-year program of estuarine and coastal studies  
4 authorized by this Act;

5 for research to determine circulation and mixing  
6 processes which control the dispersion of radioactive  
7 wastes introduced in deep waters of the open ocean:  
8 *Provided, however,* That the expenditures for this pur-  
9 pose by the Atomic Energy Commission not exceed  
10 \$1,400,000 per annum;

11 for studies of the inorganic transfer of radioactive  
12 elements from sea water to the sediments: *Provided,*  
13 *however,* That expenditures by the Atomic Energy Com-  
14 mission for this purpose not exceed \$484,000 in the  
15 first year of the program or \$299,000 in subsequent  
16 years of this ten-year period;

17 for studies of the effects of the biosphere on the dis-  
18 tribution and circulation of radioisotopes in the ocean  
19 and its seas: *Provided, however,* That expenditures by  
20 the Atomic Energy Commission for this purpose not  
21 exceed \$938,000 per annum;

22 for studies of the genetic effects of atomic radiations  
23 on marine organisms: *Provided, however,* That expendi-  
24 tures by the Atomic Energy Commission for this pur-  
25 pose not exceed \$100,000 per annum;

1           for field experiments in confined bodies of water  
2           utilizing radioisotopes: *Provided, however, That ex-*  
3           penditures by the Atomic Energy Commission for this  
4           purpose not exceed \$100,000 per annum; and

5           for two major open-sea tests of radiological con-  
6           tamination at sea, its effects on marine life, and its  
7           potential effects on humanity.

8                               DEPARTMENT OF THE NAVY

9           SEC. 13. In order to carry out the policies of S. Res.  
10          136, Eighty-sixth Congress, of this Act and of the Navy's  
11          long-range program for oceanographic research known as  
12          TENOC, the Secretary of the Navy is authorized and  
13          directed to undertake a ten-year program of expanded basis  
14          oceanographic research and hydrographic surveys as a part  
15          of the general program for the development of the marine  
16          sciences in the United States. The Secretary is authorized  
17          and directed with such funds as may be appropriated or  
18          otherwise made available to him for purposes of this Act,  
19          to carry out the following activities:

20               (a) Make grants of funds to scientists, research labora-  
21          tories, or institutions in furtherance of the purposes of this  
22          Act, such grants to be used for the purchase of equipment,  
23          acquisition or improvement of facilities, employment of  
24          scientists and personnel, and for other uses necessary to  
25          carry out the work hereunder.

1       (b) Initiate and carry out a ten-year program for the  
2 replacement, modernization, and enlargement in the number  
3 of ships for use in basic research and hydrographic surveys,  
4 and to supply, when available, ships designed for basic  
5 research to nonprofit scientific institutions: *Provided, That*  
6 when ships are supplied under this provision title to the  
7 ships shall remain with the United States Government and  
8 the ships shall be reassigned or returned to Federal operation  
9 upon termination of the grant or contract with the  
10 institution.

11       (c) Construct and operate a sufficient number of shore  
12 facilities and laboratories to support effectively the expanded  
13 program of basic oceanographic research and hydrographic  
14 surveys authorized for the Department of the Navy to under-  
15 take under this Act.

16       (d) Develop, construct, or acquire new or improved  
17 vehicles for ocean research and exploration, including but  
18 not limited to bathyscaphs and other manned submersibles,  
19 icebreakers and submarines converted for scientific use, seis-  
20 mic equipment, turbulence measuring devices, precision echo  
21 sounders, acoustic telemetering devices, and instruments for  
22 the study of the current structure of the ocean, oceanic  
23 temperatures, bottom topography, sediments, heat flow  
24 through the ocean bottom, sound transmission and velocities,  
25 ambient noise, biological activity and specimens, and water

1 samples for salinities, phosphates, oxygen, nitrates, and  
2 other chemical or elemental components of the oceans.

3 (e) Continue and expand the Navy's support of civilian  
4 oceanographic laboratories as proposed in project TENOC  
5 approved by the Chief of Naval Operations, and substan-  
6 tially similar to the recommendations made in the report  
7 of the Committee on Oceanography of the National Academy  
8 of Sciences—National Research Council.

9 (f) Establish with the National Science Foundation or  
10 the National Academy of Sciences—National Research  
11 Council—a program of scholarships for selected students  
12 beginning at the senior level in undergraduate school, and  
13 carrying through with four years of graduate training and  
14 research in the marine sciences: *Provided*, That the Depart-  
15 ment of the Navy may recommend to the National Science  
16 Foundation the institutions qualified to participate in this  
17 program.

18 (g) Conduct a systematic and expanded program of  
19 three-dimensional ocean surveys including measurements or  
20 studies of depths, salinity, temperature, current velocity,  
21 wave motion, magnetism and biological activity.

22 (h) Continue a policy of expanding assistance and sup-  
23 port to existing civilian laboratories and universities engaged  
24 in basic oceanographic research, foster the establishment and  
25 growth of new civilian laboratories for applied oceanographic



1 research needed by the Navy. In the designation of new  
2 laboratories to receive Navy assistance consideration shall be  
3 given to geographic location with reference to the oceans,  
4 with the object of maintaining a balanced program of re-  
5 search in and adjacent to the seas and oceans bordering the  
6 United States.

7 (i) Request and obtain cooperation from other govern-  
8 mental departments and agencies having an interest in the  
9 marine sciences, and to cooperate with the several States,  
10 with educational institutions, laboratories, and other public  
11 and private organizations and persons who may be  
12 of assistance.

13 SEC. 14. It is necessary in order to carry out the policies  
14 of S. Res. 136, Eighty-sixth Congress, of this Act and of the  
15 Navy's long-range program for oceanographic research  
16 known as TENOC to have the Department of the Navy  
17 carry out, under laws relating to such Department, specified  
18 duties as part of the general program for the development of  
19 the marine sciences in the United States. Appropriations  
20 authorized in this section shall be in addition to other appro-  
21 priations provided for such Department to carry out its duties  
22 under law. There is hereby authorized to be appropriated to  
23 the Department of the Navy, during the ten-year period be-  
24 ginning with July 1 of the first fiscal year following approval  
25 of this Act by the President, such sums as are necessary—

- 1        for the construction of nine one thousand two hun-
- 2        dred to one thousand five hundred-ton displacement re-
- 3        search ships: *Provided, however, That not more than two*
- 4        of these ships shall be built the first year of the program;
- 5        two in the second year; one in the third year; two in the
- 6        fourth year, and one in succeeding years of the program;
- 7        for the construction of four two thousand to three
- 8        thousand-ton displacement research ships: *Provided,*
- 9        *however, That not more than one such ship shall be*
- 10       built in any one year of the ten-year program;
- 11       for the construction of two survey ships of approxi-
- 12       mately five hundred-ton displacement;
- 13       for the construction of five survey ships of one
- 14       thousand two hundred to one thousand five hundred-tons
- 15       displacement: *Provided, however, That not more than*
- 16       two of these survey ships shall be built in any one year;
- 17       for the construction of three survey ships of two
- 18       thousand tons displacement;
- 19       for the construction of one research ship of three
- 20       hundred-tons displacement;
- 21       for operations of basic research ships in excess of
- 22       present operating costs for such ship operations: *Pro-*
- 23       *vided, however, That the operating costs of new one*
- 24       thousand two hundred to one thousand five hundred-
- 25       ton research ships not exceed \$420,000 each per annum;

1       that that of the two thousand to three thousand-ton  
2       ships not exceed \$700,000 each per annum, and that  
3       of the five hundred-ton ships not exceed \$250,000 each  
4       per annum;

5       for construction of new shore facilities for basic  
6       research;

7       for basic research operations other than ships;

8       for construction of new shore facilities for survey  
9       work;

10       for engineering needs for ocean exploration and  
11       research which may include bathyscaphs and other  
12       manned submersibles to be used for research, manned  
13       and unmanned buoys, icebreakers and submarines modi-  
14       fied or converted for scientific use, acoustic telemetering  
15       devices, current meters, direct density measuring devices,  
16       cameras and underwater television, seismic equipment,  
17       turbulence measuring devices, biological sampling de-  
18       vices, precision salinometers, precision echo sounders,  
19       towed temperature recorders, magnetometers and other  
20       instruments and laboratory equipment for oceanographic  
21       research; and

22       for establishing a program of scholarships for se-  
23       lected students as authorized in section 13 (f) of this  
24       Act: *Provided, however,* That costs to the Department

1 of the Navy of these fellowships not exceed \$300,000  
2 per annum.

3 GENERAL

4 SEC. 15. (a) Nothing in this Act shall operate to limit,  
5 restrict, or otherwise interfere with carrying out any work  
6 programed prior to enactment.

7 (b) All appropriations authorized in this Act shall be  
8 in addition to other appropriations provided for the various  
9 departments, agencies, bureaus, and offices to carry out their  
10 duties under law.

86TH CONGRESS  
1ST SESSION

S. 2692

---

## A BILL

To advance the marine sciences, to establish a comprehensive ten-year program of oceanographic research and surveys; to promote commerce and navigation, to secure the national defense; to expand ocean resources; to authorize the construction of research and survey ships and facilities; to assure systematic studies of effects of radioactive materials in marine environments; to enhance the general welfare; and for other purposes.

---

By Mr. MAGNUSON, Mr. SMATHERS, Mr. SCHOEPPLE, Mr. BARTLETT, Mr. YARBOROUGH, Mr. CASE of New Jersey, Mr. ENGLE, Mr. SCOTT, Mr. MCGEE, Mr. BUTLER, Mr. HART, Mrs. SMITH, and Mr. CLARK

---

SEPTEMBER 11 (legislative day, SEPTEMBER 5), 1959  
Read twice and referred to the Committee on  
Interstate and Foreign Commerce